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SOCIAL CLASS STATUS, APTITUDE, AND SCHOLASTIC  
ACHIEVEMENT OF GUTHRIE CENTER  
HIGH SCHOOL STUDENTS

by

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# SOCIAL CLASS STATUS, APTITUDE, AND SCHOLASTIC

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Statement of the problem. It was hypothesized in this study that: (1) the social class as evidenced by the father's occupation would have a direct relation to a high school student's ability as measured by the Lange-Thornike Intelligence Tests; (2) the social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as measured by the Iowa Tests of Educational Development; (3) the social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as indicated by his grade point average.

## CHAPTER I

### INTRODUCTION

For a number of years there has existed the belief that the Guthrie Center School District is composed of families whose occupations would place them in the "lower levels" of the social structure. Since a large percentage, approximately 42.0 per cent, of the school graduates do continue their formal education after graduation, the question has arisen as to the effect, if any, of the socio-economic status upon aptitude and scholastic achievement.

#### I. THE PROBLEM

Statement of the problem. It was hypothesized in this study that: (1) the social class as evidenced by the father's occupation would have a direct relation to a high school student's ability as measured by the Lorge-Thorndike Intelligence Tests; (2) the social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as measured by the Iowa Tests of Educational Development; (3) the social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as indicated by his grade point average.

<sup>1</sup>Robert I. Havighurst and Vernice L. Neugarten, Society and Education (Boston: Allyn and Bacon, Inc., 1942), pp. 231-32.

### Importance of the study. Social classification or class struc-

ture is one of the most controversial subjects in American education.

Time was the obvious limitation which had to be taken into account. The time element also implied that not all possible resources were consulted and that the amount of relevant literature almost precluded a complete study of the problem. The library resources used reflect the potential of American youth is examined. The "drop-out" is a matter of limitation as to resource material. The lack of refinement in the development of social classification by occupation of parents prevented to obtain further education or training. The indication is that the development of a true picture of this classification.

majority of "drop-outs" and those failing to go on in their educational

In this study there was no attempt made to study students who pursue are in what may be called the lower middle class or below, who dropped out of school. It was realized that a great deal can be learned by studying this group.

aptitude and achievement.<sup>1</sup>

Students whose file was not completed and those who were

Historically, the American people have believed that we are a nation based on equality for all. The American public schools supposedly illustrate this ideal and further teach and establish this belief.

But in reality there are in certain segments of our society significant

social class differences. The schools of America, and more specifically

of rural Iowa, should further reinforce this social classification. In every American community who recognize themselves

as being similar in many ways. They live in the same kind of dwell-

ings; have similar eating habits; dress pretty much the same way; have

<sup>1</sup>Robert J. Havighurst and Vernice L. Neugaiten, Society and Education (Boston: Allyn and Bacon, Inc., 1962), pp. 231-32, about

the same amount of education. Even though they may come from



## II. LIMITATIONS

Time was the obvious limitation which had to be taken into account. The time element also implied that not all possible resources were consulted and that the amount of relevant literature almost precluded any complete study of the problem. The library resources used reflected a limitation as to resource material. The lack of refinement in developing social classification by occupation of parents prevented the development of a true picture of this classification.

In this study there was no attempt made to study students who have dropped out of school. It was realized that a great deal can be learned by studying this group.

Students whose file was not completed and those who were fatherless were omitted from the study. This may have limited the study to a more select group.

## III. DEFINITION OF TERMS

Social class. Social class refers to a group or groups of people found in every American community who recognize themselves as being similar in many ways. They live in the same kind of dwellings; have similar eating habits; dress pretty much the same way; have similar tastes in furniture, literature, and recreation; and have about the same amount of education. Even though they may come from

different ethnic and religious backgrounds, when two members of such a group meet and start a conversation, they soon find that they have much in common. The group or groups consist of people who mingle together freely, have rather similar social habits and values, and whose young people tend to inter-marry.<sup>1</sup> Other similarities are in the amount of income and type of job.

Grade point average. Grade point average in this study referred to the average of the grades achieved during the last semester of the 1964-65 school year. It included the average of grades achieved in all academic subjects, but did not include grades achieved in physical education, band, choir, and other non-academic subjects.

Ability. This term was used to indicate the condition of being able to accomplish mental tasks and was measured by the Lorge-Thorndike Intelligence Test.

Achievement. Throughout this study the term "achievement" referred to the amount of learning accomplished by each student and was measured by the Iowa Test of Educational Development and grade point average.

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<sup>1</sup>Ibid., p. 10. (Cited Warren W. Kallenback and Harold M. Hodges, Jr., *Education and Society*, p. 385.)

#### IV. REVIEW OF RELATED LITERATURE

Literature related to the problem of social structure. This writer has found that social class studies are important for school administrators, counselors, and teachers because there are many educational factors which are closely related to social class. The studies cited in this study showed that social class is related to intelligence, school achievement, social adjustment, peer status, probability of dropping out of school before high school graduation, probability of going to college, choice of college, and participation in extra-curricular activities.

If the teacher and school are to do a good job of teaching all kinds of students, they need to know a great deal about social class in general, as well as a great deal about the individual students in their classes.<sup>1</sup>

It has usually been agreed that the socio-economic status of the family and community in which the children grow up affects their learning, behavior, and school achievement. Davis, for example, explains the influence of social class in these words:

. . .by defining the group with which an individual may have intimate clique relationships, our social class system narrows

<sup>1</sup>Roland L. Warren, Studying Your Community (New York: Russell Sage Foundation, 1955), pp. 330-331.

<sup>1</sup>Warren W. Kallenback and Harold M. Hodges, Jr., Education and Society (Columbus, Ohio: Charles E. Merrill Books, Inc., 1963), p. 385.



his training environment. His social instigations and goals, his symbolic world and its evaluation are largely selected from the narrow culture of that class with which he can associate freely.<sup>1</sup>

Havighurst and Newgarten indicated that many people in America tend to deny the existence of social class. Yet, in discussing differences in their communities, they may not mention "social class" but describe certain people within the community as the "best families" or the "elite," "the working people," still others as "poor but honest," or those who are "the bottom of the heap." Whatever terms are used, such expressions refer clearly to social organization. This organization or structure in our society is a recognized reality and part of our everyday living.<sup>2</sup>

Warren indicated that the social surveyor finds that most individuals deny the existence of social classes; yet various community studies indicated that people were usually divided into different social "layers or groups with different degrees of prestige, income, and access to products of society."<sup>3</sup>

... of the family through large industries, professions (law, medicine, engineering, dentistry), family-owned businesses, salaried executive positions, or salaried profes-

<sup>1</sup>A. Davis, Child Behavior and Development (New York: McGraw-Hill Book Co., Inc., 1943), p. 607. with the mode at \$4,500.

<sup>2</sup>Havighurst, op. cit., p. 13. families whose income ranged

from \$2, <sup>3</sup>Roland L. Warren, Studying Your Community (New York: Russell Sage Foundation, 1955), pp. 350-351.

turned by the male head of the family through owning small businesses.

Literature related to previous research. Literally thousands of difference values were shared and used daily by Elmstowners to assign to one another positions in the prestige structure. The important values were associated primarily with the economic functions from which the family derived its livelihood. Secondly, the values were associated with their connection with the family, property, ethnic, religious, male political, educational, recreational, and welfare systems. of the

Thirdly, community social activities were organized around cliques and classes. Elmstowners were inconsistent in their designation of a particular class, but analysis of selective traits ended in a social system based on five classes. nked with intellectual capacity?

Class I was characterized by incomes ranging from \$5,000 to \$35,000 per year. Members were engaged in large businesses, farming enterprises, and a few independent professions. nced Examination;

Class II achieved position through their own efforts. Income was earned largely by the male head of the family through large independent professions (law, medicine, engineering, dentistry), family-owned businesses, salaried executive positions, or salaried professions. Income ranged from \$3,000 to \$10,000 with the mode at \$4,500.

Class III was characterized by families whose income ranged from \$2,000 to \$4,000 with the mode at about \$2,800. Income was earned by the male head of the family through owning small businesses,

farms, or independent professions.

Class IV consisted of families whose income ranged from \$800 to \$2,700 with the mode at about \$1,500. About 30 per cent of the mothers of this class worked. The male heads of the family worked on farms, in the mines, the mills, and the shops in Elmstown.

Class V families' support came from many sources. The male head of the family was the chief breadwinner in 60 per cent of the families. Ninety-two per cent of these men were unskilled or semi-skilled laborers or machine operators. The income for this class ranged from \$500 to a high of \$1,500 with the mode at about \$800.<sup>1</sup>

The effect of "social class" in the individual's achievement is best indicated by Terman's study of the gifted child. Hollingshead attempted to answer this question by comparing intelligence test scores with class position. Table I, page 9, shows the results using the Otis Group Intelligence Test, Advanced Examination: more than 1,500 who had IQ's of 140 or more. He followed this group Form A.

Although intelligence was associated significantly with class position, the degree of association was not high enough to account for the concentration of failures in Class V. Neither was it great enough to attribute the high grade in Class I and II to the intellectual capacity of this prestige level.<sup>2</sup>

of this prestige level.

<sup>1</sup>August B. Hollingshead, Elmstown's Youth (New York: John Wiley and Sons, Inc., 1949), pp. 83-120.

<sup>2</sup>Ibid., p. 175.

TABLE I  
INTELLIGENCE TEST SCORES BY CLASS

IQ	I-II	III	IV	V
120-139	8	19	10	10
111-119	15	72	82	11
91-110	12	59	128	70
70- 90	<u>0</u>	<u>2</u>	<u>8</u>	<u>10</u>
Total	35	152	229	91

PER CENT WITH MEAN GRADE OF

The effect of "social class" in the individual's achievement and ability is best indicated by Terman's study of the gifted child. Over a period of twenty-five years, Terman, author of the Stanford Binet Test, has conducted a study of a group of people numbering more than 1,500 who had IQ's of 140 or more. He followed this group from childhood into adulthood; many are now in middle life. Periodically he sends them questionnaires or otherwise investigates their activities, thus giving him a very detailed picture of their achievements. One interesting thing about them was the type of home from which they originated. About a third were children of professional people; about half came from homes of the higher business class; and only a small proportion, 7 per cent, came from the working class. This was quite out of proportion to the number of people in each of these classes and



indicates that relatively more gifted children are from the higher socioeconomic classes.<sup>1</sup>

Is achievement related to social class? The achievement of Elmstown Youths was found to follow the same pattern as indicated by the intelligence quotient test results. Basically, those in Classes I, II, and III achieved higher grades than those in Classes IV and V as is indicated by the following table:

TABLE II<sup>2</sup>  
PER CENT WITH MEAN GRADE OF

Class	85-100	70-84	50-69
I & II	51.4	48.6	00.0
III	35.4	63.2	1.3
IV	18.4	69.2	12.4
V	<u>8.3</u>	<u>66.7</u>	<u>25.0</u>
Total	23.8	66.3	9.9

This indicated a somewhat "Normal" distribution curve but behind it was found strong biases at work. Students in Class I and Class II received more than twice as many grades in the 85-100 category as

<sup>1</sup>Clifford T. Morgan, Introduction to Psychology (New York: McGraw-Hill Book Company, Inc., 1956), pp. 391-392.

<sup>2</sup>Hollingshead, op. cit., p. 172.

they probably would have if chance factors alone were operating. In contrast, students in Class V were given one-third as many grades between 85-100 as they should have received if no bias had been present (8.37 observed against 23.6 expected).<sup>1</sup> It was clear, if these figures were stated in terms of opportunity, that the higher a student's class position, the better his chances are to receive high grades; and conversely, the lower a student's class position, the more likely he is to receive low grades. To be sure, a real differential factor in the home environment may have been conditioning the child's response to the school situation in each class, but this does not invalidate the relationship between social class and grades.<sup>2</sup>

Abrahamson found that grades or marks secured by pupils reflected social class differences as has been found in a number of studies in Elmstown and elsewhere. For example, a study of six junior high schools in eastern states revealed that grades awarded to pupils are closely related to their social class position. This was shown in Table III, page 12.<sup>3</sup>

<sup>1</sup>Hollingshead, *op. cit.*, p. 173.

<sup>2</sup>*Ibid.*

<sup>3</sup>Stephen Abrahamson, "School Rewards and Social Class Status," *Educational Research Bulletin*, XXI (September 1952), pp. 8-15.

TABLE III

### ACADEMIC MARKS RECEIVED BY JUNIOR HIGH SCHOOL STUDENTS ACCORDING TO SOCIAL CLASS

Social Class	Academic Marks				
	A	B	C	D	F
Upper-Middle					
Received	135	208	84	17	2
Expected*	59	157	155	62	13
Lower-Middle					
Received	206	444	330	103	15
Expected*	145	386	382	153	32
Upper-Lower					
Received	54	370	519	202	34
Expected*	156	414	410	164	34
Lower-Lower					
Received	6	42	121	99	37
Expected*	40	107	106	42	9

\*This number is the one that would be expected if the grades were distributed proportionately to the number of pupils in each social class.

## V. PROCEDURE

Design of the study. This study was organized around the effort to solve several general problems: (1) the relationship between a student's social class as evidenced by the father's occupation and ability as measured by the Lorge-Thorndike Intelligence Tests; (2) the relationship between a student's social class as evidenced by the father's occupation and scholastic achievement as measured by the



Iowa Tests of Educational Development; and (3) the relationship between a student's social class as evidenced by the father's occupation and scholastic achievement as indicated by grade point average of school subjects. The overall plan of the project was an effort to deal with these and related questions involving a study of Guthrie Center High School numbering three hundred and four students.

Source of data. The library facilities of Drake University were used extensively for resource materials. To supplement these resources, material from the Guthrie Center High School Library and Guthrie Center Guidance Department was also used.

The group studied was the Guthrie Center High School student body, grades 9-12. This group was selected because it represented an excellent cross section of the total school district population and was a group for which recent and nearly complete information was available.

The "social class" was determined by an analysis of occupations as presented by W. Lloyd Warner, Marchia Meeker, and Kenneth Eells in Social Class in America.

Class I consisted of the following occupations: lawyers, doctors, dentists, engineers, judges, high school superintendents, veterinarians, ministers (graduated from divinity school), chemists, others with post-graduate training, architects, proprietors and

managers of businesses valued at \$75,000 and over, regional and divisional managers of large financial and industrial enterprises, certified public accountants, and gentleman farmers.

Class II consisted of the following occupations: high school teachers, trained nurses, chiropodists, chiropractors, undertakers, ministers (some training), newspaper editors, librarians (graduate), proprietors and managers of businesses valued at \$20,000 to \$75,000, assistant managers and office and department managers of large businesses, assistants to executives, accountants, salesmen of real estate, salesmen of insurance, postmasters, large farm owners, and farm owners.

Class III consisted of the following occupations: social workers, elementary teachers, optometrists, librarians (non-graduate), undertakers' assistants, ministers (no training), proprietors and managers of businesses valued at \$5,000 to \$20,000, all minor officials of business, auto salesmen, bank clerks and cashiers, postal clerks, secretaries of executives, supervisors of railroad and telephone, justices of the peace, and contractors.

Class IV consisted of the following occupations: proprietors and managers of business valued at \$2,000 to \$5,000; stenographers; bookkeepers; rural mail clerks; railroad ticket clerks; sales people in dry goods; factory foremen; electricians, plumbers, carpenters, and

*Social Class in America*, (Chicago: Science Research Association, 1949), pp. 140-141.

watchmakers who own their business; dry cleaners; butchers; sheriffs; and conductors.

Class V consisted of the following occupations: proprietors and managers of businesses valued at \$500 to \$2,000, dime store workers (clerks), hardware salesmen, beauty operators, telephone operators, carpenters, plumbers and electricians (apprentices), timekeepers, line-men, telephone or telegraph repairmen, radio repairmen, medium skilled workers, barbers, firemen, butchers' apprentices, practical nurses, policemen, seamstresses, cooks in restaurants, bartenders, and tenant farmers.

Class VI consisted of the following occupations: proprietors and managers of businesses valued at less than \$500, moulders, semi-skilled workers, assistants to carpenters, baggage men, night policemen, watchmen, taxi and truck drivers, gas station attendants, waitresses, and small tenant farmers.

Class VII consisted of the following occupations: heavy laborers, migrant workers, odd-job men, miners, janitors, scrub-women, newsboys, and migrant farm laborers.<sup>1</sup>

The Lorge-Thorndike Intelligent Tests were used to measure ability. According to Frank S. Freeman, Professor of Psychology,

<sup>1</sup>W. Lloyd Warner, Marchia Meeker, and Kenneth Eells, Social Class in America, (Chicago: Science Research Association, Inc., 1949), pp. 140-141.

Cornell University, Ithaca, New York, "...the Lorge-Thorndike Intelligence Test is among the best group of tests available, from the point of view of the psychological constructs upon which it is based and that of statistical standardization."<sup>1</sup>

A separate score was given for each of the sections of the test, verbal and nonverbal. A composite score of these two tests was also given. The composite score was used in this study since the author felt that it gave a truer picture of an individual's ability rather than relying on either one of the individual tests alone.

Since subjective human evaluation is universally fallible, the author felt that he must use some means of evaluating pupils' progress which was unbiased. When teachers alone judge students, they may be influenced by a student's appearance or personality, his socioeconomic status, his attitude toward the teacher or subject, or his past school marks.<sup>2</sup> These and many other factors may influence the teacher's evaluation. The Iowa Tests of Educational Development provided a means of unbiasedly evaluating students.

<sup>1</sup>Oscar Krisen Buros (ed.), The Fifth Mental Measurements Yearbook, (New Jersey: The Gryphon Press, 1959), p. 350.

<sup>2</sup>How to Use the Test Results of the Iowa Tests of Educational Development (A Manual for Teachers and Counselors, Iowa City, Iowa: State University of Iowa, 1963), p. 8.



The Iowa Tests of Educational Development (ITED) is an annual test given in the Guthrie Center High School, grades 9-12, and was used to measure educational growth and development. These tests consisted of a battery of nine objective tests designed to provide a comprehensive and dependable description of the overall educational development of a high school student.<sup>2</sup> This score

The individual tests in the battery were as follows:

TITLE OF TESTS	NO. OF ITEMS
1. Understanding of Basic Social Concepts . . . . .	90
2. Background in the Natural Sciences. . . . .	90
3. Correctness and Appropriateness of Expression. . . . .	99
4. Ability to Do Quantitative Thinking . . . . .	53
5. Ability to Interpret Reading Materials in Social Studies.	80
6. Ability to Interpret Reading Materials in the Natural Sciences . . . . .	80
7. Ability to Interpret Literary Materials. . . . .	80
8. General Vocabulary . . . . .	75
9. Use of Sources of Information. . . . .	60

The main part of the test battery consisted of Tests 3-8, and particularly Tests 5-7. The last set of tests mentioned was used to measure the ability to interpret reading materials in social studies, the natural sciences, and literature. Even though these tests were constructed in the external form of reading comprehension tests, they, Tests 5-7, were designed to measure much more than generalized reading skill. Basically, they are intended to measure the student's ability to do critical thinking on the broad areas designated. These tests were concerned with how well a student could use whatever he had learned in acquiring,

<sup>1</sup>Ibid., pp. 6-7.

<sup>2</sup>Ibid., p. 34.

interpreting and evaluating new ideas; in relating new ideas to old; in applying broad concepts and generalizations to new situations or to the solution of problems. They were not concerned so much with what the student had learned, in the sense of specific information.<sup>1</sup>

The standard composite score gave a fairly accurate notion of the general level of the pupil's educational development.<sup>2</sup> This score was used for the purpose of overall comparisons and summaries.

The composite score of the Iowa Tests of Educational Development was arrived at by taking the sum of the standard scores on Tests 1-8 and changing them into a standard score by means of a table similar to those used in transforming the raw scores on the separate tests.

Test 9 was not included in the composite score since it was quite different in character from the other tests. Test 9 was more specific than the other tests and was not closely related to general educational development. Because of this, the composite score which was used in this study was the composite of Tests 1-8.

Questionnaire. A short questionnaire was developed and administered to the members of the Guthrie Center Community High School dealing with the establishment of the father's current occupational status. No effort was made to inquire about family income because of expected

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<sup>1</sup>Ibid., pp. 6-7.

<sup>2</sup>Ibid., p. 34.

lack of validity of students' response. However, it did provide the information necessary to establish the "social class" of each student.

The data obtained was organized so that the results of the questionnaire, intelligence quotient scores, scores on the Iowa Tests of Educational Development tests, and grade point averages were listed on separate cards for each student. Students were then classified into the various "social class" groups and studied to obtain the needed data for this study.

### RESULTS OF THE SURVEY

The data gathered regarding the students of Guthrie Center High School and their social class revealed the following information:

Table IV, page 21, classified the Guthrie Center High School students by social classes which were determined by the fathers'

Table IV revealed that eight of the students (1.3 per cent) were in Class I; one hundred and nine of the students (41.1 per cent) were in Class II and II combined; one hundred and twenty-two of the students (41.0 per cent) were in Classes III, IV and V; thirty-four of the students (12.5 per cent) were in Classes VI and VII; and five of the students (1.2 per cent) were in Class VII. These groups were studied throughout this study.



## CHAPTER II

11

TABLE IV  
PRESENTATION AND ANALYSIS OF DATA OBTAINED  
GUTHRIE CENTER HIGH SCHOOL STUDENTS CATEGORIZED  
BY SOCIAL CLASS, SECOND SEMESTER, 1963

The purpose of this chapter was to present an analysis and

interpretation of the data in answer to the question of whether a stud-

ent's social class, as evidenced by the father's occupation, have an

effect upon aptitude and scholastic achievement as measured by the

Large-Thorndike Intelligence Tests, the Iowa Tests of Educational

Development, and his grade point average.

Social Class Group	Number	Per Cent
Professional person	8	3.0
Proprietor, manager, land owner	101	38.1
Clerk or kindred worker	13	4.9
Skilled worker or foreman	43	16.2
Semi-skilled or laborer	66	24.9
Unskilled worker	29	10.9
Unemployed or part time worker	5	1.9
Total	265	99.9

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the students (46.0 per cent) were in Classes III, IV and V; thirty-four

of the students (12.9 per cent) were in Classes VI and VII; and five of

the students (1.9 per cent) were in Class VII. These groups were

studied throughout this study.

Table V, page 23, presented TABLE IV Guthrie Center High School

GUTHRIE CENTER HIGH SCHOOL STUDENTS CATEGORIZED  
BY SOCIAL CLASS, SECOND SEMESTER, 1965

Over half of the students (52.9 per cent) in Classes VI and VII

Social Class Group		Number	Per Cent
I	Professional person	8	3.0
II	Proprietor, manager, land owner	101	38.1
III	Clerk or kindred worker	13	4.9
IV	Skilled worker or foreman	43	16.2
V	Semi-skilled or tenant farmer	66	24.9
VI	Unskilled worker	229	10.9
VII	Unemployed or part time worker	5	1.9
Total		265	99.9

Although a high percentage of students were in Class II, a full range of social class groups did exist in the community.

The number and percentage of students classified in Class I and II were not great enough to clearly portray the differences in aptitude and achievement by social classes. However, certain general tendencies were shown on the tables which follow.

A surprising number of students were in Class II. This result-  
ed because of the large number of students whose fathers owned their  
own farms.

Table V, page 23, presented the Guthrie Center High School students by social classes and intelligence quotients.

Over half of the students (52.9 per cent) in Classes VI and VII had intelligence quotients of less than 110, while fewer than half of the students (47.1 per cent) had intelligence quotients above 110. Over three-fourths of the students (80.0 per cent) in Class VII had intelligence quotients of 110 or less, while no one in the remaining twenty per cent had an intelligence quotient of more than 120.

Slightly more than one-third of the students (37.6 per cent) in Classes I and II had intelligence quotients of 110 or less, while about three-fourths of the students (62.4 per cent) had intelligence quotients above 110. Only one-fourth of the students (25.0 per cent) in Class I had intelligence quotients of 110 or less, while three-fourths of the students (75.0 per cent) had intelligence quotients above 110. One-fourth of the students (25.0 per cent) in Class I had intelligence quotients above 130.

Almost half of the students (43.6 per cent) in Classes III, IV, and V had intelligence quotients of 110 or less, while more than half of the students (56.4 per cent) had intelligence quotients above 110.

The findings of Table V, page 23, showed that there was a relationship between a student's social class and intelligence quotient. This was more apparent when the lower intelligence quotients were

TABLE V

GUTHRIE CENTER HIGH SCHOOL STUDENTS CATEGORIZED BY  
SOCIAL CLASS AND INTELLIGENCE QUOTIENTS, JANUARY, 1966

Large- Thorndike Intelligence Test Scores	Social Classes													
	I		II		III		IV		V		VI		VII	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
90 and Below	0	0	4	3.9	0	0	1	2.3	1	1.5	1	3.5	2	40.0
91 to 100	0	0	6	5.9	0	0	5	11.6	11	16.7	7	24.1	1	20.0
101 to 110	2	25.0	29	28.9	4	30.8	7	16.3	23	34.8	6	20.7	1	20.0
111 to 120	4	50.0	33	32.7	4	30.8	14	32.6	20	30.3	12	41.4	1	20.0
121 to 130	0	0	20	19.8	3	23.1	12	27.9	6	9.1	2	6.9	0	0
131 and Above	2	25.0	9	8.9	2	15.4	4	9.3	5	7.6	1	3.5	0	0



compared, and when the extreme ends of the social class groups were compared. Only 25.0 per cent of those in Class I had intelligence quotients of 110 or less, while more than three times this percentage (80.0 per cent) of the students in Class VII had intelligence quotients of 110 or less. On the other hand, no one in Class VII had an intelligence quotient over 120, while 25.0 per cent of the students in Class I had intelligence quotients over 130. Here the greatest variation was in the comparison of the higher scores.

Students in Classes III, IV, and V were somewhat equally divided in that 24.6 per cent had intelligence quotients of 110 or less while 57.4 per cent of the students had intelligence quotients of 110 or above.

Therefore, a study of Table V showed that there was a relationship between a student's social class and his intelligence quotient.

Table VI, page 25, presented the Guthrie Center High School students by social classes and scores on the Iowa Tests of Educational Development.

Almost three-fourths of the students (71.6 per cent) in Classes VI and VII scored below the fiftieth percentile on the Iowa Tests of Educational Development, while fewer more than one-fourth of the students (28.4 per cent) scored in the fiftieth percentile or over. More than three-fourths of the students (80.0 per cent) in Class VII

TABLE VI

GUTHRIE CENTER HIGH SCHOOL STUDENTS CATEGORIZED BY SOCIAL  
CLASS AND IOWA TESTS OF EDUCATIONAL DEVELOPMENT,  
FIRST SEMESTER, 1965

Iowa Tests of Educa- tional Development Scores in Percentile	Social Classes													
	I		II		III		IV		V		VI		VII	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
0- 9	0	0	5	4.9	0	0	1	2.3	5	7.6	6	20.7	1	20.0
10- 19	0	0	10	9.9	0	0	5	11.6	3	4.5	5	17.2	1	20.0
20- 29	1	12.5	6	5.9	1	7.7	4	9.3	17	25.8	2	6.9	1	20.0
30- 39	0	0	12	11.9	0	0	4	9.3	6	9.1	4	13.8	1	20.0
40- 49	0	0	13	12.9	0	0	0	0	10	15.2	3	10.3	0	0
50- 59	0	0	11	10.9	2	15.4	7	16.3	8	12.1	5	17.2	0	0
50- 69	0	0	5	4.9	1	7.7	3	7.0	3	4.5	0	0	1	20.0
70- 79	0	0	9	8.9	2	15.4	4	9.3	3	4.5	2	6.9	0	0
80- 89	1	12.5	9	8.9	5	38.5	6	14.0	3	4.5	1	3.4	0	0
90-100	6	75.0	21	20.8	2	15.4	9	20.9	8	12.1	1	3.4	0	0

scored below the fiftieth percentile, while less than one-fourth of the students (20.0 per cent) scored in the fiftieth percentile or above. No one in this group scored above the seventieth percentile.

Fewer than one-half of the students (44.1 per cent) in Class I and II scored below the fiftieth percentile on the Iowa Tests of Educational Development, while over one-half of the students (55.9 per cent) were in the fiftieth percentile or over. About one-tenth of the students (12.5 per cent) in Class I scored below the fiftieth percentile, while almost nine-tenths of the students (87.5 per cent) scored above the eightieth percentile. Of the students in Class I, 75.0 per cent scored in the ninetieth percentile or above, while no one scored below the twentieth percentile.

Slightly fewer than one-half of the students (46.9 per cent) in Classes III, IV and V scored below the fiftieth percentile on the Iowa Tests of Educational Development, while more than one-half of the students (53.1 per cent) scored in the fiftieth percentile or above. About one-tenth of the students (11.5 per cent) in these Classes scored below the twentieth percentile, while about one-fourth of the students (27.0 per cent) scored the eightieth percentile or above.

The findings of Table VI, page 25, showed that there was a relationship between a student's social class and his score on the Iowa Tests of Educational Development. This was shown by comparing



Table VII, page 29, presented the Guthrie Center High School Classes I and II with Classes VI and VII. Almost one-half of the students (44.5 per cent) in Classes I and II had scores below the fiftieth percentile, while almost twice that percentage of the students (71.6 per cent) had grade point averages below 1.6, while slightly more than in Classes VI and VII had scores below the fiftieth percentile. Likewise, about twice the percentage of students (55.9 per cent) scored above the fiftieth percentile in Classes I and II as did the students in Classes VI and VII (28.4 per cent).

In comparing Class I with Class VII, a student in Class VII had about six times the chance of scoring below the fiftieth percentile as a student in Class I. No one in Class I scored below the twentieth percentile, while 40.0 per cent of the students in Class VII scored below the twentieth percentile.

On the other extreme of the Table, no one in Class VII scored in or above the seventieth percentile while 75.0 per cent of the students in Class I scored in or above the ninetieth percentile.

Students in Classes III, IV, and V were somewhat equally divided in that 45.9 per cent had scores below the fiftieth percentile, while 54.1 per cent of the students had scores in the fiftieth percentile or above.

Table VI showed that there was a definite relationship between a student's social class and his score on the Iowa Tests of Educational Development.

Table VII, page 29, presented the Guthrie Center High School students by social classes and grade point averages.

Almost two-fifths of the students (38.2 per cent) in Classes VI and VII had grade point averages below 1.6, while slightly more than one out of ten students (14.7 per cent) had grade point averages of 2.6 or more. Over one-half of the students (60.0 per cent) in Class VII had grade point averages below 1.6, while no one in this class had a grade point average of 2.6 or above.

Only about one-fifth of the students (22.0 per cent) in Classes I and II had grade point averages below 1.6, while more than two-fifths of the students (41.3 per cent) had grade point averages of 2.6 or more. Only about one-tenth of the students (12.5 per cent) in Class I had grade point averages below 1.6, while almost nine-tenths of the students (87.5 per cent) had grade point averages of 2.6 or more.

About one-third of the students (32.0 per cent) in Classes III, IV and V had grade point averages below 1.6, while about the same number of students (27.9 per cent) had grade point averages of 2.6 or more.

Table VII, page 29, showed that there was a relationship between a student's social status and his grade point average.

Table VII showed that students in Class VI and VII had twice the chance of having grade point averages below 1.6 as did students in

TABLE VII

GUTHRIE CENTER HIGH SCHOOL STUDENTS CATEGORIZED BY SOCIAL CLASS  
AND GRADE POINT AVERAGE, SECOND SEMESTER, 1965

Grade Point Average	Social Classes													
	I		II		III		IV		V		VI		VII	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
0.0-0.59	0	0	2	2.0	0	0	0	0	1	1.5	1	3.4	0	0
0.6-1.59	1	12.5	21	20.8	1	7.7	12	27.9	25	37.9	9	31.0	3	60.0
1.6-2.59	0	0	40	39.6	4	30.8	17	39.5	28	42.4	14	48.3	2	40.0
2.6-3.59	3	37.5	26	25.7	8	61.5	13	30.2	11	16.7	5	17.5	0	0
3.6-4.00	4	50.0	12	11.9	0	0	1	2.3	1	1.5	0	0	0	0

Class I and II.

#### SUMMARY AND CONCLUSIONS

When Class I was compared with Class VII, an even greater difference was shown. Students in Class VII had about five times greater chance of having grade point averages below 1.6 than did students in Class I. This showed the relationship between social class and low grade point averages.

Students in Classes I and II had three times the chance of having grade point averages of 2.6 or more than did students in Classes VI and VII.

Furthermore, students in Class I had over eighty-seven times as many chances of having grade point averages of 2.6 or higher than did students in Class VII. This showed the relationship between a student's social class and high grade point average.

The percentage of students in Classes III, IV, and V who earn grade point averages below 1.6 (33.0 per cent) and those who earn grade point averages of 2.6 or above (28.9 per cent) were almost equal. This showed that the middle social classes filled the gap between the upper and lower social classes by being somewhat equally divided on the various grade point averages.

Insufficient number of students to portray clearly some of the differences between social class and aptitude and scholastic achievement.



### CHAPTER III

#### SUMMARY AND CONCLUSIONS

The purpose of this study was to determine what affect a student's social class had upon his aptitude and scholastic achievement. In an effort to answer this question, this study tried to determine if: (1) social class as evidenced by the father's occupation would have a direct relation to a high school student's ability as measured by the Lorge-Thorndike Intelligence Test; (2) social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as measured by the Iowa Tests of Educational Development; and (3) social class as evidenced by the father's occupation would have a direct relation to a high school student's scholastic achievement as indicated by his grade point average.

The data in this study revealed the following information:

1. The Guthrie Center community was composed of a full range of social class groups, with a high percentage concentration in Class II. Although a large number of students were studied, some of the categories lacked a sufficient number of students to portray clearly some of the differences between social class and aptitude and scholastic achievement. The data shows that a student

2. There was a relation between a student's social class and intelligence quotient. The data showed that there was a greater distinction in scores of ninety and below when comparing class I with Class VII than there was in comparing scores of 131 and over of these classes. Even with this difference, there was definite evidence that the higher a student's social class, the greater were his chances of having a higher intelligence quotient.
3. There was a relation between a student's social class and his score on the Iowa Tests of Educational Development. The data showed that a student in Class VII had twenty times greater chance of scoring in the zero to nine percentile than a student in Class I, while the student in Class I had a seventy-five times greater chance of scoring in the ninetieth to one hundred percentile than a student from Class VII. Here the greater distinction was in the upper scores rather than the lower scores. Following the same pattern as intelligence quotients, the higher a student's social class, the greater were his chances of scoring higher on the Iowa Tests of Educational Development.
4. There was a relation between a student's social class and his grade point average. The data shows that a student

in Class VII has about five times greater chance of having a grade point average of 0.0-1.59 than a student from Class I. Conversely, a student from Group I has fifty times greater chance of having a grade point average of 3.6-4.0 than a student from Class VII. Here again there was a greater distinction in the upper grade point averages than the lower grade point averages. Following the same pattern as intelligence quotients and the scores on the Iowa Tests of Educational Development, the data showed that the higher a student's social class, the greater were his chances of having a higher grade point average.

On the basis of the results of this study, the following general recommendations in regard to certain phases of the Guthrie Center School District's program were made:

1. The Guthrie Center School District was not composed largely of families of the "lower levels" of the social structure. Therefore, this should be brought to the attention of the administration and faculty.
2. In the Guthrie Center School District there appeared to be a large percentage of students whose aptitude and scholastic achievement were near the "top" and also

just below the "middle" as evidenced by social class and scores on the Iowa Tests of Educational Development. As a result, it would be wise to study the grading systems which are presently being used.

3. The administration of the Guthrie Center School District should be aware that their district is not completely "average" in social class if and when they adopt a "grouping procedure."
4. The administration and faculty should realize that, on the basis of social classes, nearly the entire number of students who should continue their education beyond high school were doing so. The school's policy to encourage students to do so should be continued in the future.
5. Continued studies should be undertaken to further understand and describe the students enrolled in the Guthrie Center School District.



## BIBLIOGRAPHY

### A. BOOKS

- Binet, Oscar Krisen (ed.). The Fifth Mental Measurements Yearbook. New Jersey: The Gryphon Press, 1950.
- Cook, Lloyd Allen, and Elaine Forsyth Cook. A Sociological Approach to Education. New York: McGraw-Hill Book Company, Inc., 1950.
- Devine, A. Child Behavior and Development. New York: McGraw-Hill Book Company, Inc., 1943.
- Hoytchurst, Robert J., and Bernice L. Wengerter. Society and Education. Boston: Allyn and Bacon, Inc., 1937.

### BIBLIOGRAPHY

- McLoughlin, August B. Elmston's Yearbook. New York: John Wiley and Sons, Inc., 1949.
- McLoughlin, W. Warren, and Harold M. Barker. Educational and Society. Columbus, Ohio: Charles E. Merrill Books, Inc., 1963.
- Shaffer, Clifford T. Introduction to Psychology. New York: McGraw-Hill Book Company, Inc., 1956.
- Warner, W. Lloyd. Social Class in America. New York: Harper and Brothers, 1960.
- Warner, W. Lloyd, Marvin M. Miller, and Kenneth R. Davis. Social Class in America. Chicago: Rand McNally, Inc., 1945.
- Warner, W. Lloyd. Social Class in America. New York: Russell Sage Foundation, 1945.

### B. PUBLICATIONS OF THE GOVERNMENT

- How to Use the Test Results of the Iowa Tests of Educational Achievement. A Manual for Teachers and Administrators. Iowa City, Iowa: State University of Iowa, 1952.

## BIBLIOGRAPHY

## A. BOOKS

- Abrahamson, Stephen. "School Rewards and Social Class Status." *Educational Research Bulletin*, 1959, 35(1), 1-10.
- Buros, Oscar Krisen (ed.). The Fifth Mental Measurements Yearbook. New Jersey: The Gryphon Press, 1959.
- Cook, Lloyd Allen, and Elaine Forsyth Cook. A Sociological Approach to Education. New York: McGraw-Hill Book Company, Inc., 1960.
- Davis, A. Child Behavior and Development. New York: McGraw-Hill Book Company, Inc., 1943.
- Havighurst, Robert J., and Bernice L. Neugarten. Society and Education. Boston: Allyn and Bacon, Inc., 1957.
- Hollingshead, August B. Elmstown's Youth. New York: John Wiley and Sons, Inc., 1949.
- Kallenbach, W. Warren, and Harold M. Hodges, Jr. Education and Society. Columbus, Ohio: Charles E. Merrill Books, Inc., 1963.
- Morgan, Clifford T. Introduction to Psychology. New York: McGraw-Hill Book Company, Inc., 1956.
- Warner, W. Lloyd. Social Class in America. New York: Harpers and Brothers, 1960.
- Warner, W. Lloyd, Marchia Meeker, and Kenneth Eells. Social Class in America. Chicago: Science Research, Inc., 1949.
- Warren, Roland L. Studying Your Community. New York: Russell Sage Foundation, 1955.

## B. PUBLICATIONS OF THE GOVERNMENT

- How to Use the Test Results of the Iowa Tests of Educational Development. A Manual for Teachers and Counselors. Iowa City, Iowa: State University of Iowa, 1963.

## C. PERIODICALS

- Abrahamson, Stephen. "School Rewards and Social Class Status,"  
Educational Research Bulletin, XXXI (September, 1952), pp. 8-15.
- Di Vesta, Francis. "Meaningful Learning; Motivation, Personality,  
Interpersonnal, and Social Variables," Review of Educational Re-  
search, XXXI (December, 1961), 511-521.
- Miller, L. M. "The Drop-out; Schools Search for Clues to His Problems,"  
School Life, XLV (May, 1963), 5, 30-33.